Claims

- 1. An automation system,
- having terminals (14) for field devices (20),
- having an excitation component (16) and a measurement component (18) for the field devices (20), and
- having a connection unit (19) for selective connection of the field-device terminals (14) to the terminals (15, 17) of the excitation component or measurement component (16, 18).
 - 2. The automation system as claimed in claim 1, wherein the connection unit (19) is a switch matrix.
 - 3. The automation system as claimed in claim 2, characterized by
 - a control unit (21) for controlling the switch matrix (19).
 - 4. The automation system as claimed in claim 3, wherein switch matrix (19) and control unit (21) are designed as elements of an integrated circuit.
 - 5. A method for identifying connection errors in field devices (20) connected to an automation system, having the steps:
 - supplying by means of an excitation component (16) a signal to a field device (20)
 - determining by means of a measurement component (18) a measurement variable assigned to the field device (20), and
 - analyzing the measurement variable by means of an analysis unit (21), where by means of a connection unit (19) for selective connection of field-device terminals (14) and terminals (15, 17) of the excitation component or measurement component (16, 18), freely-selectable connection combinations

are used for respectively supplying the signal and determining the measurement variable.

- 6. The method as claimed in claim 5, characterized by repeating the process of supplying and determining using different connection combinations.
- 7. The method as claimed in claim 6, wherein the repetition and/or selection of the used terminals (14) depends on the result of the analysis of an earlier measurement.
- 8. A method for correcting connection errors in field devices (20) connected to an automation system, having the steps:
- identifying a connection error, and
- correcting the connection error by means of a connection unit (19) for selective connection of field-device terminals (14) and terminals (15, 17) of an excitation component or measurement component (16, 18).
- 9. The method as claimed in claim 8, wherein correction of the connection error includes adapting the connection unit (19) to suit the field-device type.
- 10. The method as claimed in claim 8 or 9, wherein correcting the connection error involves comparing with a known configuration and appropriate adjustment of the connection unit (19).
- 11. The method as claimed in any of the claims 5 to 10, wherein the connection unit (19) is controlled by a control unit (21).

12. The use of a connection unit (19) for selective connection of field-device terminals (14) of an automation system to terminals (15, 17) of an excitation component or measurement component (16, 18) of the automation system.